

Notice of Allowability	Application No.	Applicant(s)	
	09/486,864	KAKUHARI ET AL.	
	Examiner	Art Unit	
	Devona E. Faulk	2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendmnt filed on 7/10/2006.
2. ☒ The allowed claim(s) is/are 21,22,24-30 and 33.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 21,22,24-30 and 33 have been considered but are not persuasive. The applicant agreed to an examiner's amendment adding indicated allowable subject matter.
2. Claims 1-20,23,31 and 32 are cancelled.

EXAMINER'S AMENDMENT

3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Howard Sobelman (Reg. No. 39038) on 9/15/2006.

The claims are to be amended as follows:

Claim 21, line 6: after "dipole sound source", insert - - ; and a non-directional sound source provided in a vicinity of a center of the dipole sound source wherein an acoustic radiation thereof is driven to have an inverted phase form that of the acoustic radiation of the dipole sound source which is directed into the vehicle interior - - .

Claim 21, line 13: after "interior", insert - - , wherein the combination of the dipole sound source, the non-directional sound source and the signal processing means

produce a radiated sound where substantially no direct sound reaches a location in the vicinity of a position of a listener - - .

Claim 22, line 12: after "source", insert - - , the on-vehicle sound-amplification apparatus located outside the vehicle interior, and the combination of the dipole sound source, the non-directional sound source and the signal processing means produce a radiated sound where substantially no direct sound reaches a location in the vicinity of a position of a passenger - - .

3. Claims 21,22,24-30 and 33 are allowed.

4. The following is an examiner's statement of reasons for allowance:

Regarding claims 21 and 22, prior art Zong discloses an on-vehicle sound amplification device located outside a vehicle (electronic loudspeaker system including an amplifier that is mounted externally to a transport vehicle and can be used for public addressing. Kehry discloses roof-mounted dipole speakers (Figure 2). Speakers 11 and 13 are dipole speakers (speaker 11 is outputted in one direction through funnel 12 and speaker 13 is outputted in an opposite direction through funnel 14). Hayakawa teaches of a signal processing means that controls a phase as claimed (phase of the signal to each sound source changes with the signal processing means (page 2, paragraph 10)). It would have been obvious to one of ordinary skill in the art at the time of the invention to use Hayakawa's concept of a signal processing means controlling the phase in order to control the location of sound image. The prior art or combination thereof fails to disclose or make obvious a non-directional sound source provided in a vicinity of a center of the dipole sound source wherein an acoustic radiation thereof is

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driven to have an inverted phase form that of the acoustic radiation of the dipole sound source which is directed into the vehicle interior, wherein the combination of the dipole sound source, the non-directional sound source and the signal processing means produce a radiated sound where substantially no direct sound reaches a location in the vicinity of a position of a listener. Therefore the prior art or combination thereof fails to disclose or make obvious an on-vehicle sound amplification apparatus as claimed.

Claims 24-30 and 33 are allowed due to dependency on claim 21.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Devona E. Faulk whose telephone number is 571-272-7515. The examiner can normally be reached on 8 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on 571-272-7848.

The Art Unit location of your application in the USPTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Art Unit 2615. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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SUPERVISORY PATENT EXAMINER